Claims:

1. An optical imaging contrast agent with affinity for an abnormally expressed biological target associated with prostate cancer.

2. A contrast agent as claimed in claim 1 with molecular weight below 14 000 Daltons.

3. A contrast agent as claimed in claim 1 or 2 of formula I

V-L-R, (I)

wherein V is one or more vector moieties having affinity for an abnormally expressed target in prostate cancer, L is a linker moiety or a bond and R is one ore more reporter moieties detectable in optical imaging.

4. A contrast agent as claimed in any of claims 1 to 3 comprising a contrast agent substrate, wherein the target is an abnormally expressed enzyme, such that the contrast agent changes pharmacodynamic properties and/or pharmacokinetic properties upon a chemical modification from a contrast agent substrate to a contrast agent product upon a specific enzymatic transformation.

5. A contrast agent as claimed in any of claims 1 to 4 having affinity for any of the targets selected from steroid 5 alpha-reductase, fatty acid synthase, COX-2, prostate specific antigen, androgen receptor, lipoxygenase-5, VEGFR, Cyclin D1, CD44, Syndecan-1, prostate stem cell antigen (PSCA), Ki-67, alpha-methylacyl-CoA racemase (AMACR), cathepsin D, hepsin, MT1-MMP, urokinase receptor (uPAR), epidermal growth factor receptor (EGFR/her-2/neu), Fas (Apo-1/CD95), Fas ligand (FasL) and Macrophage Scavenger Receptor 1 (MSR1).

6. A contrast agent as claimed in any of claims 3 to 5 wherein V is selected from peptides, peptoid moieties, oligonucleotides, oligosaccharides, fat-related compounds and traditional organic drug-like small molecules.

7. A contrast agent as claimed in any of claims 3-6 wherein R is a dye that interacts with light in the wavelength region from the ultraviolet to the near-infrared part of the electromagnetic spectrum.

8. A pharmaceutical composition for optical imaging of prostate cancer, comprising a contrast agent as defined in any of claims 1 to 7 together with at least one pharmaceutically acceptable carrier or excipient.

9. Use of a contrast agent as claimed in any of claims 1 to 7 for the manufacture of a diagnostic agent for use in a method of optical imaging of prostate cancer involving administration of said diagnostic agent to an animate subject and generation of an image of at least part of said subject.

10. A method of optical imaging of prostate cancer of an animate subject involving administering a contrast agent as defined in any of claims 1 to 7 to the subject and generating an optical image of at least a part of the subject to which said contrast agent has distributed.

11. Method as claimed in claim 10 for diagnosis of prostate cancer, for follow up of the progress of prostate cancer development, for follow up of treatment of prostate cancer or for surgical guidance.

12. Use of an optical imaging contrast agent as defined in any of claim 1 to 7 for optical imaging of prostate cancer.

13. Use of an optical imaging contrast agent as claimed in claim 12 for diagnosis of prostate cancer, for follow up of the progress of prostate cancer development, for follow up of treatment of prostate cancer or for surgical guidance.